PLAY METER

UPDATE EDITION

Volume 6, Number 8 May 1, 1980

Game Plan, Tournament Soccer join for marketing effort

By RAY E. TILLEY

Allying marketing efforts is the object of adding the Game Plan Inc. product line to the sales program of Tournament Soccer and Tournament Eight Ball under Tournament Marketing International.

Innovation in Game Plan's pinball line and stimulation of player interest are the hoped-for benefits from the "marriage" of the Addison, Illinois manufacturer's product line to the pool and table soccer lines of Tournament Marketing, based in Seattle.

Ken Anderson, vice president/marketing at Game Plan told PLAY METER, "We certainly hope foosball and pool players are pin players. It's a natural marriage, really."

Distributors' feedback on changes wanted in the quality of product is also expected to be gained by the combined Tournament and Game Plan sales forces. The "localized attention to the sales trail should help both firms, said Anderson. "The consumer is the location owner, the guy who has the product on his premises at all times. The location in Alabama has different demands from one in California, for instance."

With more personal attention to each level of marketing, the two companies' games should realize "prolonged income" from the existing lines of Tournament Marketing and Game Plan, said Anderson.

A Game Plan pingame oriented to the tournament circuit will be added in the near future by his company, said Anderson. He offered no further description of the product.

The tournament play stimulus should fortify the multi-level marketing approach, in Anderson's view. Tournament Soccer and Tournament Eight Ball engage some 5,000 to 10,000 persons a year in tourneys, he noted. "Certainly, tournaments are one of the single most needed tools to prolonged income in the cash box," said the Game Plan vice president.

From players' stimulated interest in pingames, changes in manufacture are expected to follow. "To innovate new things, a player can tell you what he'd like to see. The Tournament Packet will get a lot of input," said Anderson.

Tournament Marketing currently polls 120,000 persons for feedback by mail, he noted.

Of the added numbers for the sales force to serve distributors,

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Steve Collins, 15, of Thunder Bay, Ontario, receives his trophy embedded with gold lettering and the symbol of the 1980 Winter Olympics from Jack LeHart, upstate New York vending operator. Steve was the winner in the Lake Placid tricathelon of arcade games and Jack implemented the game room for Olympians. Winning attention of the world's athletes, obviously, were the amusement games. [*See story on page 7.*]

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Anderson had no firm figure of the effect of the marketing marriage. Spokesmen for Tournament International could not provide details for UPDATE by press time.

In related news, AES Technology Systems, Inc., of which Game Plan is a subsidiary company, announced recently that record sales and earnings were achieved in its second fiscal quarter and for the six months ending December 31, 1979. Martin T. Abrams, AES chairman, announced earnings of $540,000, or eleven cents per share, for the quarter on revenues of approximately $5 million.

For the six months, operating revenues for AES were up 133 per cent from the $3,600,000 reported a year earlier, for an $8,400,000 figure in the second half of 1979.

Abrams attributed the sharp increase in sales to the acquisition of Game Plan, which manufacturers pingames and slot machines.

Stern pins to lure heart funds

Stern Electronics will contribute to the American Heart Association by luring America's college fraternities and sororities to use their heads to benefit heart research. Stern will offer twenty *Mohammed Ali* flipper games to the "Greeks" who present the most creative efforts to raise funds for heart research.

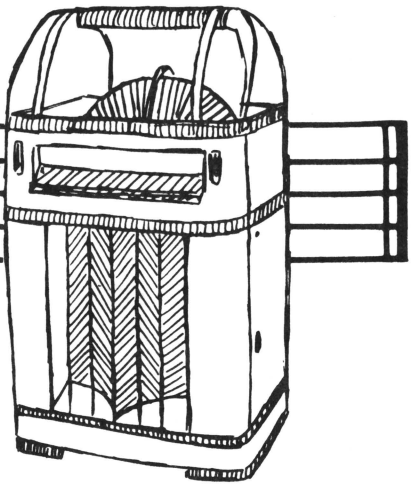
The top twenty fraternities and sororities in the April competition were to be announced this month by Stern, according to a spokesperson for TRG Communications, the firm handling the promotion.

The Heart Association promotion was to be outlined in New Orleans at PLAY METER's Amusement Operators Expo. The next issue of PLAY METER will carry more details of the youth-oriented Stern campaign connecting pingames to Heart Association funds raising.

The promotion has the participation of "The National Lampoon" humor magazine, which will provide "lifetime subscriptions" to fifty runner-up college organizations involved in the effort.

Pierre Laniel, left, president of Laniel Automatic in Montreal, and Jean Coutu, vice president, display their pride in the silver trophy cup presented at the Gottlieb National Distributor Sales Meeting in Oak Brook, Illinois. Laniel Automatic was the only Gottlieb distributing house outside the U.S.A. in North America to receive the cup for "more than 25 years of outstanding service" to the Gottlieb line. Laniel Automatic has been in business for 45 years in Montreal and at Laniel branches in Canada.

By Pat Matthews
WQUE New Orleans



Rock'n'Joel, Rhythm'n'Smokey

It seems now that we're gearing up into the 1980s, the musical pace is picking up. We're returning to our rock'n'roll roots. But the rock'n'roll you may be accustomed to from your youth has been spiced up and flavored. "Textured" is probably the best description for the music of today.

In the next issue of PLAY METER, I'll have not only my records review, but also an article of insight, hopefully, into the music biz of today through the eyes of someone who depends directly upon it for livelihood—me.

LET'S GET SERIOUS—JERMAINE JACKSON—Motown M 1469 F

You're a member of a famous musical family. You've got friends in the recording industry. One of them happens to be Stevie Wonder. And you are fortunate enough to have him write you some songs, including your first solo effort for 45 RPM release. He produces your album and arranges some of the songs. What does all this lead to? Another Jackson striking it rich on his own, that's what!

The song is a hand-clapping, up-beat, happy number with an emphasis on percussion. It sounds a lot like some of Stevie Wonder's earlier songs and with Mr. Wonder on background vocals, it's great nostalgia. I give it an eight out of ten.

WE COULD HAVE IT ALL — MAUREEN McGOVERN—Warner Brothers WBS 49177

She's getting to be known as a singer of themes. From the movie "Poseidon Adventure" to the latest, "The Last Married Couple In America" and all discs in between, it's been Maureen McGovern with a slick style of singing. Her voice is so recognizable, it's a shame her singing isn't acclaimed in the proper way. This is a beautiful love ballad which fits the mood of the movie and a possible event in real life. Written by Gimbel and Fox, this song should go all the way on someone's list. Try seven out of ten or better.

WHY YOU WANNA TREAT ME SO BAD—PRINCE—Warner Brothers WBS 49178

This guy is good on record, but in person he's incredible. On his debut album he wrote, produced, arranged —and played all the instruments. And of course, he sang. Once again it's the Prince of funky soul and this time he doesn't want to "be your mother and your sister, too." It's a nice little dance number this time which is loaded with hooks in all the right places. There's even some nice guitar work which may help in picking up some extra followers. It's got to be a nine out of ten.

LOVE ON THE PHONE — SUZANNE FELLINI—Casablanca NB 2242

Don't let the label fool you. It's not disco! (What's disco, anyway?) I shouldn't say that. This is New Wave at its Pogo best. It's bouncy and silly and has some of the most outrageously suggistive lyrics on record. I don't know how much airplay it'll get but people are already *talking* about this one. So it may be an important record to have, but no rating.

LET ME BE THE CLOCK — SMOKEY ROBINSON — Tamla T 54311 F

"Cruisin" brought Smokey back into the musical limelight and this new one, from a new album should take him one step farther, if that's possible. It's a soulful ballad a lot like the "Cruisin" smash with the same dreamy feel. The lyrics are a nice departure and a unique concept. My guess is the promotion department at Motown will have a nice gimmick to go along with the release of "Let Me Be The Clock". This record is a hit from the word "Go"—ten out of ten *everywhere*. (And please put me on the mailing list for my very own Smokey Robinson clock!)

TRAIN IN VAIN (STAND BY ME)—THE CLASH—Epic 9-50851

This group is terrific. But not many people know this. With the present release, their recognition should pick up sharply. It's rock'n'roll, yet it's a little funky. Possibly a bit funkier than a British New Wave band could possibly be expected to perform. This may seem a bit brazen, but all things considered, The Clash could very well be the best British band with this particular sound since the Rolling Stones. Eight out of ten at least.

AFTER YOU—DIONNE WARWICK —Arista AS 0498

Now that she's gotten that Grammy on the mantle, it's time for a new album. This single is the third from the Barry Manilow-produced comeback lp and may fall into that "third single rut" we've talked about before, but it may not. Because of the award, it may not matter what she sings anymore. They may all turn to gold and this record certainly deserves it. A beautiful song sung by a beautiful person with a heavenly voice. Nine out of ten.

YOU MAY BE RIGHT—BILLY JOEL—Columbia 1-11231

He's back! Hot on the heels of his own Grammy award winning lp "52nd St.", Billy Joel and his own version of rock'n'roll appear. It's up-tempo, sung perfectly with catchy humorous lyrics, and produced excellently by Phil Ramone once again. The chorus is the hook and I *know* I'm right—this is a ten out of ten record for sure. Long live Rock 'n' Joel!

By William Arkush

Microelectronics Division Manager
Exidy, Incorporated
Sunnyvale, California

In the 'chips'

SEMICONDUCTOR DEVICE TECHNOLOGY
First of a three-part article to be continued in UPDATE

With so many devices being incorporated into computer-age technology, today's technicians' daily existence has become a nightmare of device numbers. We are not only required to know the integrated circuit identification numbers (7400s, 5400s, 2500s, 2100s, etc.), we are also required to know the manufacturers' numbers. For example, one semiconductor manufacturer's 74181 is made as a 25181 by another manufacturer.

If that isn't enough of a problem, there are the various technologies of devices which read like a who's who column. To start with, there are the MOSs (CMOS, NMOS, VMOS, DMOS, and their brother pmos). Then there are the Polars (bipolar and isoplanar), and the logic families T2L, I2L, ECL, and DTL. Too, there are chips, gates, buffers, drivers, processors, micros, minis, UARTS, ROMS, RAMS, PROMS, EPROMS, EAROMS, and EEPROMS.

Oh yes, there are PROMS that program by blowing their junctions to create a program, and there are PROMS where you grow the junction to create a program within the device. (Quite simply, it is the bipolar PROM versus the AIM device—Avalanche Injected Migration).

Clearly, there are many aspects in understanding the hardware of a logic system. Regardless of whether it is a simple digital timer or a complex computer syster, it is amazing that all of the technology has a common base of silicon (pure sand) about 25 mills (0.025 inch) square. No matter what function the device has been designed to perform, the active ingredient is the actual circuit chip (i.e., dice). There are many processes known for creating a chip of silicon, perhaps as many as the different technologies.

Technologies in this case refers to the many process methods used in creating the device itself. The E-beam evaporator, for example, is a machine which controls an electron gun similar to the gun of the CRT to deposit sub-atomic layers of dopant material into the wafer. The typical three-inch silicon wafer is .010 inch thick and extremely brittle.

This thin little wafer will be processed in many ways before it is an array of completed semiconductor die (individual chips). To mention a few, the pure silicon wafer will be immersed in the most caustic of chemicals, exposed to severe radiation exposure of electron beam particles, or subjected to high intensity molecular collisions of gas atoms and metal molecules; it will be deposited on with photochemicals, etched away by acids. Some wafers are evaporated onto while rotating in a planetary vacuum evaporator and yet other wafer proceses sputter targeted materials onto the wafer substrate. It may be surprising that an integrated monolithic circuit exists when you consider all the process steps a wafer is subjected to before it becomes a circuit die (chip), the subject of this article. After all, the chip is merely a component itself within a larger assembly.

The end product, of course, is the integrated circuit itself.

The wafer

By and large, "wafer" here means a thin slice of an oblong ingot of pure silicon. Since the silicon material is a crystalline atomic structure, it is predictable. In fact, it is easy to orient new atoms and adhere them to adjacent atoms because the atoms themselves are cubic building blocks.

The two basic types of silicon orientation used to produce silicon ingots are: 1-1-1 and 1-0-0. This symbolizes the lattice structure of the crystal which is comprised of a nucleus and the electron spacing and orbital patters which build the structure of the crystal's lattice.

Silicon ingots are grown in an oven at about 600 degrees C. and built from pulling a seed crystal of the material through an atmosphere of Si + SiO2 to yield 2SiO in a special vertical furnace. The atoms then combine as the spindle with the seed crystal is pulled while it rotates at 5-10 RPM.

The end product is an oblong cylinder about 18 inches long and about three inches in diameter and tapered at each end. From this shape, the cylinder is tooled and then sliced into .010 inch thick wafers of uniform size and shape.

After cutting these thin slices, each one has to be mechanically polished, chemically polished, and electrochemically processed before the wafer fabrication process even starts.

When the wafers have been subjected to chemical etchants, the raw silicon is exposed to air. This is not a favorable condition for the wafer because the silicon begins an oxydation process which is uncontrolled and eventually will ruin the wafer surface.

It may not seem significant, but the surface aggravation of a polished and processed wafer is less than 20 A (Angstrom) units. One *A* equals one ten-thousandth of a micron. One micron equals 1/25 of a *mill*. One mill is equal to 1/1000 of an inch.

Since the spectrum of light is measured in Angstron units, the introduction of photochemical oxides —or oxygen— is sufficient to alter the thickness of the silicon base material. As you can see, this begins the controlled process of the wafers, so after they have been polished and treated, the wafers are kept in nitrogen-purged dry boxes.

The nitrogen purges out the oxygen from the immediate atmosphere and the silicon cannot attract ion exchange between the nitrogen gas or the non-present oxygen. From this point on, each step of the process is carefully controlled and monitored.

Whatever process is chosen, depending on the device to be fabricated, the process is like a recipe in that time, temperature, ingredient

quantities, ingredient additive rates, and process steps are carefully followed to insure maximum yield of the finished parts.

One wafer may easily produce 1500 to 2000 individual silicon chips. Circuit dice are typically .025 inch square to .025 by .045 inch. The number of legs the I. C. will have, determines the geometry of the circuit dice.

As the wafer fab process continues it sequentially increases in complexity and therefore the quality assurance becomes as important as the resolution of registration.

The thin sliced wafers move from the clean-and-polish area into the photolithography section which is typically under yellow light. Here the process begins by shooting a minute pattern (image) onto a photochemically treated wafer.

In fact, there are many steps included in this series before the wafer moves into another area. Basically, the wafer has an image deposited all over it with a film master or a step and repeat camera, depending on the process requirements.

Then the area which is exposed through the image is etched away in a negative resist process and remains in a positive resist process. Generally, the lesser amount of material is etched away. Therefore, the film masks reflect the negative process. Quite simply, the wafers are coated with a developer which makes it react like a film negative.

Then the wafers are dipped in an acid etchant bath for a period of time which determines how much of the raw silicon will be etched away. Nitric acid is the commonly used etchant and has a reaction value which is determined by the concentration of the acid.

At the end of the etch process you have a wafer with tiny holes and patterns etched into it. The typical depth of the etched area is 1500 A to 2500 A units—just enough area to make a difference in the flow of electrons through the surface layers. There are so incredibly many variables in process considerations that it is overwhelming—so I'll move on to the next phase of the process.

Now we have the exposed windows in the silicon surface, so we must fill them with something. These are our choices of process steps: epitaxial reactor, diffusion furnace, vacuum evaporator, E-beam evaporator, R-F sputtering and some electrochemical processes. All these names are references to the types of equipment which produce relatively the same effect: a method to deposit another semiconductor material into the holes, windows, and patterns which the etching process left.

The major difference is the size that all things have been reduced to. The circuit traces are frequently one half a thousandth wide. The metalization area for lead attack is two to five thousandths square, and the depths of the junctions which have been created in the evaporation process are less than 5000 A at best.

Everything has been reduced down to the sub-atomic level whereby the addition of too many atoms during depositation is enough to vary the thickness of the junction and alter the performance of the part significantly.

The combinations of photolithographic, chemical, and deposition processes continue until the part is completed. In other words, the recipe is complete when it includes all the oven work.

Generally, the last step in the wafer fab process is the controlled addition of oxides, called *passification*. It is amazing that we ended at the same place we started. First, we guarantee there are no O2 combinations; then at the end, we add them. The answer is simple: when O2 is added correctly it reacts with other host materials and becomes a form of glass. Therefore, when you have completed the wafer fab process, you seal the part, with its delicate and tiny pattern, under glass. A very thin layer of glass such as SiO2—also known as silicon dioxide window glass.

The chip

When the wafer fabrication process has been completed, the wafer consists of a thousand or more processed images arranged in an X-Y coordinate system with narrow spacing between the rows and columns.

The next step in the overall scheme is the die testing which is performed by automatic wafer probers. Typically, the big Fairchild and Teledyne systems, which are specifically designed to emulate the chip under load, will test all die elements and ink out any chips which fail the test.

When this is done, some minutes after you start, you have a processed wafer capable of being handled with finger cots and moved into the next process area, wafer scribe. At this point, the inked wafers are placed in wafer carriers for more convenient handling.

Previous to this time, the wafers were placed in boats, wafer carriers, and/or planatary assemblies during handling and processing. But now, the wafers are not in need of such critical and stringent handling procedures.

The wafer saw or wafer scribe operation is an absolute abuse compared to what the delicate wafers have been previously exposed to. The wafer saw is a diamond dust carborundum blade, about .003 inch thick at the tip, less than three inches in diameter, and spins at 10,000 RPM.

The machine is generally programmable for its X (vertical), Y (horizontal), and O (theta) travel. *Theta* is the arch which is derived from warpage of the wafer during processing.

The wafer saw cuts the dice row by row and column by column. This is accomplished on a vacuum chuck so as to hold the work in place. Or, the wafer is cut on a thin adhesive pad which accomplishes the same result. After this, the tiny dice are off-loaded into their carriers and packaged with a moisture absorbing material until they are ready for assembly.

In contrast, the wafer scribe operation is just as it suggests. The die elements are scribed between each row and column, and scribed so that the depth of the cut is at least ½ to ¾ the total thickness of the wafer.

After all rows and columns are scribed, the wafer is removed from the vacuum chuck, placed on a true and flat machined surface and rolled over with a small rolling pin.

All the die elements just fracture at their perimeters and lay there until the operator picks them up with a vacuum pencil. Again, they are placed into little holders until the assembly operation is turned on.

As an interesting note, you would think that with so many dice coming from one wafer, and so many wafer from one ingot, there would be a surplus of integrated circuits. The truth is, there is really only one third of the product that is made that is available at any one time. The semiconductor manufacturers have established an assembly procedure whereby they send their processed wafers to the Orient for assembly. Therefore, you have a quantity of wafers in process here in Silicon Valley, a quantity of wafers in test and transit, and a quantity of wafers being packaged and in transit throughout the distribution chain.

Why the Oriental operation? Purely a cost savings.

Look at a semiconductor chip and read what country it was assembled in. I'll bet it was made in Malaysia, Mexico, Hong Kong, Taiwan, or Korea.

What ever happened to American technology? It is inside the package, covered up.

Next month in UPDATE: "The Integrated Circuit"

Tax Clinic:

Determining depreciation rates

By Comprehensive Accounting Corp. of Aurora, Illinois. Comprehensive provides a bookkeeping, accounting, and tax service to over 14,000 business clients each month through a nationwide network of more than 140 franchised offices.

QUESTION: How do I determine depreciation rates?

ANSWER: The basis of certain tangible and intangible assets may be recovered by deductions for depreciation, which is a rational and systematic allocation for the exhaustion, wear and tear, and obsolescence of depreciable property used in a trade or business, or held for the production of income. There are several allowable methods of computing depreciation, and selection of the proper method must be made after careful examination of the various factors involved.

In addition to selecting the method of computing depreciation, the useful life of the property to be depreciated must be determined. Useful life is the number of years over which the asset will be depreciated, and its determination is based on the intended use, the age of the asset, and the acquisition and policy as to repairs, upkeep, and replacement. Each taxpayer can determine the useful life to which the asset will be used by him. However, the Internal Revenue Service publishes guidelines for depreciation purposes, which guidelines provide a range in which a reasonably useful life will be acceptable. For example, the range for office furniture, fixtures, and equipment is eight to twelve years, and the range for automobiles is two and one-half to three and one-half years.

Annual depreciation may be figured by utilizing any method which is reasonable and which is consistent with recognized trade practices. The Internal Revenue Service has stated that certain common methods of depreciation are reasonable, including the straightline method, declining balance and the sum of the years' digits.

Under the straightline method, the cost or other basis of the property, less its estimated salvage value, is deducted in equal amounts each year over the useful life of the property.

Under the declining balance method of depreciation, deduction for depreciation is accelerated in the earlier years, as the depreciation determined under the straightline method is multiplied by a factor of one and one-quarter to two times the rate, as determined under straightline.

However, each year this factor is computed on the undepreciated basis of the property so that the accumulated depreciation taken in past years is subtracted from the basis of the property; this results in larger depreciation in the earlier years and smaller depreciation in the latter years. For example, assuming that an asset was being depreciated under the double declining method of depreciation, has a useful life of five years, and had a cost of $10,000, the first year's depreciation would be calculated at the rate of $4,000 ($10,000 divided by five years equals $2,000, times two, equals $4,000).

The second year, the depreciation would be $2,400, as the first year's depreciation is subtracted from the basis, resulting in a depreciable base of $6,000. In the case of real estate, the declining balance may be limited to one and one-half times, or even one and one-quarter times the straightline method.

Another accelerated method of computing deperciation is the sum of the years' digits method. Under this method, a fraction is applied to the basis of the property, less salvage value, in each year. The denominator of the fraction is the total of all the years of its estimated useful life.

Thus, if the useful life is five years, the denominator is 15 (1+2+3+4+5). The numerator changes from year to year representing the remaining years of the useful life. The rate for an asset having a useful life of five years would be 5/15ths in the first year, 4/15ths in the second year, and so on.

The method selected for calculating depreciation can be different for different assets. However, it must be selected in the year the asset is placed in service, and once selected the method cannot be changed without permission from the Commissioner of the Internal Revenue Service, except in the case of changing from an accelerated method of depreciation, such as declining balance or sum of the years' digits, to a straightline method.

The use of a particular method of depreciation must be tailored to the needs of the particular individual. The accelerated methods of depreciation produce larger depreciation in the early years, thus reducing taxable income during these years. The straightline method allows a constant deduction against taxable income and produces a less dramatic effect in the early years. Other factors also are involved in the choice of methods and should be examined carefully to determine which of the various methods will best suit your needs.

PLAY METER

Everything You Expect From A Trade Publication...

And More...

Arcade scores in Olympics

North America produced the winner of the 1980 Winter Olympics Arcade Tricathelon grand prize at Lake Placid, New York. Steve Collins, 15, a member of the Canadian ski jump team won the three-pronged game room event with scores exceeding 645,000 on Bally's *Harlem Globetrotters* pingame and 4,700 on the *Space Invaders* electronic video game by Midway.

All athletes at Lake Placid were able to test their skills at the newest game room in town. Irving Kaye, along with Bally and Midway, sponsored a five-day tricathelon at Olympic Village ending February 22, and free play was available from January 25 onward into the regular athletic competition.

TRG Communications, Inc., coordinators of the event, reported athletes crowded into the special games arcade to practice for the amusement machines event. Forty pinball, video, foosball, and pool table games were made available for their use.

In the tricathelon competition, Olympian Steve Collins found his skills focused mainly on the video and flipper games rather than on the table soccer game ("foosball") manufactured by Irving Kaye. Second and third place arcade champions, Alex Michaelides of Cyprus and Paul Gibbons of Great Britain, respectively, found their skills touched on all three game modes but could not match Collins' total scoring.

The games represented the first time an Olympic arcade had been organized with full approval of the local committee level. (See UPDATE, February 1, 1980.) The manufacturing companies in providing the games hoped to catch wide attention to them as a clean, wholesome form of leisuretime competition enjoyed by the best young athletes of America and other countries.

Planning had taken over two years with the cooperation of Jack LeHart, resident of Lake Placid and owner of Upstate Vending Service in New York State.

Steve Collins, who lives in Thunder Bay, Ontario, has been skiing for five years and playing pinball about three years. He said the same kinds of talent, discipline, and reflexes are necessary to excel in both types of competition. "Luck may be a factor now and again, but you shouldn't depend on it," Steve asserted. As a member of Canada's three-man ski jump team, Steve travels to many events, but he said he tries not to let training interfere with a "rigorous pinball schedule."

EDITOR'S NOTE: The May 15 issue of PLAY METER will focus on arcade operations. Features will examine, among other things, token play, game mix, traffic flow, decor, and management.

Pinball enjoys popularity in Ontario, but this was Collins' first pinball and coin-operated games competition. With the future for such games looking bright in Canada, he said he is ready to enter more contests in the arcade field as they come open.

Obviously, the sponsors for the Lake Placid tricathelon were motivated by the marketing potentials rooted in extensive media exposure of coin-operated games in the Olympic Arcade. It was expected to boost the recognition factor of coin-op games in the U. S. and countries where pinball, video electronic, and foosball games are not already household words.

The three manufacturers involved were pleased with the response to their Olympic Arcade, but not surprised. Said Thomas J. Nieman, vice president/marketing of Bally's Pinball Division: "It is our belief the games provide an excellent release from the rigors of preparing for Olympic competition. Coin-operated games represent a truly American leisure time activity." Pinball was "born in Chicago," he observed.

Bill Currier, sales manager of Irving Kaye, stated: "We regularly conduct amateur competitions in table games, particularly pool and foosball. We see them as healthy competitive sports activities, which have the advantage of not requiring special strength, speed, or physical prowess, so they have widespread appeal. Being played indoors, they are truly games for all seasons. We wanted to help set up an Olympic Arcade to give athletes from all over the world an opportunity to see and experience a typical American arcade situation, which is so much a part of leisuretime activity in the U. S.

"Olympic athletes are the right age group for us too," noted Currier.

According to Stan Jarocki, vice president of marketing, Midway, "Electronic video games are an American innovation that comes directly out of the space program. It represents a miniaturization of space technology: an advanced electronization of coin-operated machines.

"It's a privilege to be offering this unique form of American entertainment to the greatest athletes from all over the world. We see it as the best offering the best."

Standard Change-Makers, Inc., of Indianapolis recognized Atlanta's Jack McElwaine [above] recently as the leader in sales gains of the company's fourteen district representatives. Overall sales for the company were up fifteen percent, National Sales Manager John S. Dugan told the recent 25th annual sales and service meeting of the company reps.

Intl. Sales Marketing relocates

International Sales Marketing & Management Consultants has moved from southeast regional offices in Marietta, Georgia to Atlanta, where the firm will be located at 203 South Chase, announced Peter J. Petropoulos, president of the firm.

James Taylor was named vice president for the Southeast. At the Atlanta office, Jackie Barnett handles customer relations for the coin-op industry and amusement machines. International also manages real estate and investments, as well as construction projects.

The firm's executive offices are located in Pompano Beach, Florida, with offices also in Ellsworth, Maine and Frankfurt, Germany.

As a sales consultant, International handles vending, bottling, military sites, fast foods, OCS, and music and games.

International's new Atlanta telephone number is (404) 252-8371.

Classified

FOR SALE: Set of 4 wall games: Gremlin Trapshoot & Play Ball; Sunbird–Foul Play & Super Bowl. Clean & in working order. $2000 for set or trade for jukeboxes of $2000 value. JIM SUDKAMP, R. # 1, Sadorus, IL 61872. Tel.: 217/564-2409.

WANTED: OLDER VIDEO GAMES, NEED NOT BE WORKING. For Sale: pinballs, bingos, jukes, foosball, shuffles, wallboxes, etc. CONCORDE CORP., Tel. 614/653-7777.

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WANTED: MANAGER [EXPERIENCED] or manager-mechanic. Send replies to P.O. Box 24170, New Orleans, La. 70184, Dept. F1U

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